

## VIDEO CONCEPTS IN CRM TRAINING

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CAPT. YOCUM: Thank you, Dick. It's a pleasure to be here today. And it's a little bit difficult to follow in the steps of the big guns of our big brethren major airlines. I don't claim to be an expert in the field of cockpit resource management, and what we've done basically is experiment without trying to teach anything for the last year. I'd like to thank you for the opportunity to share these experiences with you.

The topic that I agreed to take on was video concepts in training applications. And I can't really tell you just about that, because it's just the medium that we used. I really have to start at the beginning and tell you a little bit about what we've done for the last ten months. And I hope I don't steal anyone else's thunder in the process. Dick has already told you about the committee work, and this afforded me personally the exposure to think in terms of what it is that we needed to achieve.

I had the opportunity and privilege to attend United's cockpit resource management program which Ed so expertly administers. And more recently I had the privilege of being hosted by Stan Fickes and Chuck Copeland to experience Dr. Sellard's expert presentation at USAir on captain development.

In-house our preparation for our attempts and endeavors in cockpit resource management began with a program definition of what we wanted to accomplish, and the method of that implementation. And above all, we wanted to create in the pilot group a thirst that they were really eager to hear the subject of cockpit resource management. This was something that wasn't really new to any of us and certainly isn't new to you. It's just redefined. We've put a label on it. And when I first heard John Lauber's presentation down in Tampa, it excited me to put this label on a particular topic and really identify the importance of that topic.

I was extremely privileged to be able to create this same atmosphere with our pilots during March of this year by having John Lauber fly to Harrisburg from San Francisco and Dave Shroyer from United come in from Denver, and Dick came up from Washington.

And along with the support of our company president, Roy Clark, who announced and introduced the program, we put

on a little two-hour meeting that introduced 35 of our pilots, about 12 of our flight attendants about a dozen management people in our company, and some invited guests some of whom are here today, Fred Spatz from Suburban being one of them.

And it gave us the opportunity to expose out pilots firsthand to John's very excellent and provoking speech and United's approach to what they did with command leadership resource management training and for Dick to give an excellent overview of what it is that the Regional Airline Association through the committee and through this conference this week hoped to achieve. This indeed stimulated our people to where they started to become thirsty for what it is we might be able to develop together.

The term "together" is very important here because the next step we took as a follow-through action was to have a meeting with our in-house pilot group called The Pennsylvania Airlines Pilots Association and gain their support and enthusiasm and direct cooperation into the development of our program.

Following that meeting, we also had an instructor workshop in-house where we again took a look at defining the goals of just what it is that we wanted accomplished and how we would go about implementing the program.

The first thing that we did following our inaugural meeting -- which, incidentally, was videotaped, and this afforded all of our pilots to be able to see the entire meeting -- was create a section in our "Pilot Bimonthly."

Let me explain the "Bimonthly." It's actually an adaptation that we stole from our big brother, USAir, of what they call their "Flight Crew Quarterly." We do it on a bimonthly basis; try to do it in short bits and pieces of general subjects and also specific topics for a certain airplane. It's a self-study course, a brief test that's handed out or rather issued with the course and then turned back in at the completion of the month the bimonthly is issued in.

We created a section in the "Bimonthly" for cockpit resource management. And what we've used as material in this bimonthly section has been what I feel are excellent articles from trade magazines and publications so that we can again maintain the awareness of what cockpit resource management is and why it should be important to us.

In March of this year the "Bimonthly" contained a topic called "Cockpit Resource Management" which was an article by Dan Manningham and was published in "Business and Commercial

Aviation" in August of 1982.

The next issue was May of 1983 where we used an FAA accident prevention program publication entitled "Human Behavior, the Number 1 Cause of Accidents."

In July of this year, we had the topic "Cockpit Encounters" which was excerpted from "Psychology Today" magazine from November of 1982 and was written by William Burrows.

These articles indeed enhanced the thirst that we were trying to create in our people and kept the subject in front of them. And we feel that just the awareness itself has been a very important step in the learning process that we hope to build on in the future.

The next step we took was with our line supervisory pilots, and we had several meetings with them where I explained all the happenings within the Regional Airline Association committee. We talked about what we'd like to do and how best to go about that. And they agreed to take on the task of examining the manuals and procedures and the cockpit duties to examine the CRM techniques that we were currently employing and evaluate where we really stand; what changes do we need to make; what improvements or additions or deletions. Really just take a look at what we are doing now and determine a base from where we need to make any changes.

Getting to the subject of video techniques, the training department delved into the creation of video programs. And initially it was a very difficult chore. I have two of my experts here with me today: Stan Czarnik, who is one of our captains, and Dick Stonefeld, another one of our captains and check airmen. These gentlemen got very excited about video applications to the point now where they have attended a seminar that is specifically aimed at producing video publications on a very inexpensive budget. They just completed that two weeks ago.

The first course they put together or production, if you will, is an introduction to cockpit resource management. It was originally done as a slide tape presentation and then converted to video tape which is a little bit easier format to use, for us at least.

We also had an incident in which Stan Czarnik was personally involved, and he thought it would make an excellent scenario. Stan had taken off from Harrisburg, and shortly after takeoff turned on the engine bleeds, and not too long after that they had smoke in the cockpit; he recognized it was probably from the bleed air. He and his

co-pilot had committed a few errors, and there were definitely some communication problems that ensued in this event.

So Stan set to work along with Dick to recreate this particular incident. We have used that film in our training programs to show to a class and then have a discussion among the class as to what they observed, what their actions might have been. We don't do it in a judgmental way, and it's not done in a instructional way. It's done as a learning experience and something that's very thought provoking.

We also experimented with videotaping demonstrations and drills. We were very fortunate in our ongoing transition to Shorts 360s that Craig Horst and company from Suburban Airlines allowed us to go to their facility. And Fred Spatz and his people worked with us to videotape their emergency procedures drills on the Shorts 360. Those turned out very well and have given us additional ideas as to how we can create demonstrations and scenarios on videotape that can be very educational for people to go into that type of training having a much clearer understanding of what it is they will be exposed to and enhancing the educational process.

The additional activity that we've had in the CRM area is that we've been working with an industrial psychologist, who is a professor at Penn State University, by the name of Dr. Rhube Chisholm. He has agreed to work with our company on the grassroots level with our pilots and flight attendants to take a look at defining what it is we need to do and how best to do it. I look at this as being the ingredient to solve the psychological area that we have no expertise in, that being the human behavior element. We are like ducks out of water in that particular subject whereas this is where he works and lives every day. So we are pretty excited about the opportunity there.

To summarize where we think we are and what we think we are going to be doing in the future, we'll definitely be expanding our videotape techniques to enhance the presentation of these programs. But I've defined a new objective to the cockpit resource management training that will in effect only by using CRM as a vehicle to now reach this more important objective in my mind -- if you can say that anything is more important than safety in the aircraft, which of course it can't be.

But the new definition that I've uncovered in the process of our exploration into cockpit resource management is the effect that this entire process has had on our employees and the employee relations that we are starting to enjoy as a result of this project. And it in fact is becoming the saleable product that I can use with top

management to convince them that the expenditure of money is a good investment in cockpit resource management, because it is definitely showing signs of improved employee relations and improved enthusiasm with the employees for the company.

In closing for videotape applications -- which is what I probably should have talked a lot more about and will certainly in our working group be able to give more firsthand information, in fact, we brought the tapes along --- my conclusion is that in videotape applications with simple home videotape equipment you can do some pretty impressive productions on a beer budget. Thank you.

MR. COLLIE: Mike, thank you for sharing with us those experiences. Are there any questions for Mike? Does anyone have any questions on techniques or on anything?

I guess you get off easy, then, Mike. Thank you kindly.

Captain Frank Foster, the chief pilot of Ransome Airlines was fortunate also because Ransome also has some pretty sophisticated video techniques and video equipment. I guess Dawson has purchased some of that stuff, and they have made quite a bit of use of it. In fact, Ransome filmed John Lauber's presentation the day following his presentation at Pennsylvania Airlines, and I have back in the office at home copies of that video presentation which is a 60-minute presentation for all of the committee members on CRM and RAA. I also have a Beta and a VHS copy of that in a lending library, which I will be happy to lend to any members of the RAA if you want to show that to your people or if you want to get it and copy it, as long as I get the original back.

We were very fortunate that Dawson and his people and Frank Foster provided that service for us. Frank has some ideas on video concepts, too. So without any further ado, Captain Frank Foster of Ransome Airlines.

Frank Foster  
Ransome Airlines

CAPT. FOSTER: Thank you, Dick. I was hoping that Mike would cover everything that I had to say so I could say we did just what he did and go back and sit down. However, it didn't quite happen that way.

We were exposed and educated in cockpit resource management about the same time most of the members of the RAA were with Dr. Lauber's presentation last November. And we realized at that time that we were very proud of ourselves for our technical expertise in how we run our airplanes and how we teach our airplanes. But we realized after his presentation that we didn't really train captains; we trained pilots. We taught pilots and we instructed in equipment. John's presentation, for those of you who have seen it, delves more into a captain being a captain, not a pilot with four stripes.

We realized, as the Association did, that not only were we lacking there, we didn't have anything. When we at Ransome upgraded a pilot to a captain's position, he would get an hour in my office sitting across the desk drinking a cup of coffee with my "now you are a captain" speech. And compared to Dr. Lauber's presentation or United's \$7 million program, mine was definitely on a beer budget, one cup of coffee.

After going to John's presentation, we decided, Mike and I, to get John to come to Philadelphia and give that presentation to a limited number of our pilots. We limited the number so we could tape it, and we have presented that tape to everybody that has gone through recurrent training since then.

We also found when we sat down with the training staff at Ransome, there was no way you could do this with just a video presentation. You had to give background information. You had to give some printed material. As Mike has pointed out, there have been some excellent articles published in trade magazines in the last year. And we have stolen just about as many of them as he has and published them in our "Training Quarterly."

Everybody that used to work for USAir has some type of quarterly. Mine started with "Foster's Quarterly," and then

it went to "Foster's Chronicle," because the secretary wouldn't put "quarterly" in there when it came out every five months instead of every three months. Then it went to "Foster's Semiannual," and then it went to "Foster's Whenever." So now the training department does it, and they do it on a quarterly basis.

But we did the same thing. We stole articles that related to cockpit resource management. The best one that we had seen and that we presented first was an article published in "Business and Commercial Aviation," and it is titled "Why the Airlines are Taking the Macho Out of Their Men." We used this as a predecessor to our own presentation.

The first thing we did after that was to show our recurrent classes the tape of John Lauber's presentation. We used classroom instruction on the management grid styles that we stole from United when we went out there for their presentation.

In the small companies, in the regional airlines, the captain has a lot more leeway and a lot more responsibility and a lot more instantaneous authority, I think, than those who work for USAir or United. So the 9.1-type captain or the very left side of his brain type captain is very prevalent in our industry. Fortunately, there is only one chief pilot in each company. But the 9.9-type approach, the very, very dominant, the very authoritarian captain, is the norm for us rather than the exception. These are the people that we have to try and reach. Whether or not we are going to change their behavioral patterns is another question. Whether or not we expose them to the information and expose them to the education, is our main responsibility, and that's where we are now.

We also have in our classroom presentation a blurb on effective communications in the cockpit. And this is far from the right side; tactful talking; and for the left side; intelligent listening. I think anybody who has been in a small airplane after nine or ten hours can understand that sometimes tactful talking is a little difficult to come by, and intelligent listening is sometimes more difficult to come by. But we do that, and we try to express to the pilots the importance of that particular area of cockpit resource management.

After that, we have an open discussion of the grid styles and their various applications. The idea that the authoritarian captain is not good for all the time, is not accurate, for there very well may be that time where the authoritarian approach is required. So we try and tell the pilots that the styles are different. They have different

applications. If you use a particular style all the time, you will be right sometimes. If you use different types of management styles for different situations, you will probably be right more often. So the lions of the left seat that occupy the seats of regional airline airplanes or commuter airplanes or the single pilot airplanes, are probably not going to change too much. But if you expose them to this, that's the best we can do for the time.

The second phase of our resource training is where the video concepts come in. And what we have done is to take a couple of instructor pilots and put them in a role playing situation, and videotape this. We put it in an airplane in the hangar. We white out the windshield, and we stick Cary Ransome in the back with his multimillion dollar camera. I don't know how much one of those video recorder cameras cost, but it's not really that expensive. United has spent \$7 million, I understand, on their program. So far I have spent 400 bucks on ours. We also haven't run 5,000 pilots through it, either.

We put the instructor pilots into a role playing situation, and we have a training scenario of an incident that either happened in our company or in our community. It's very easy to point your finger at the major accidents that cause zillions of lives and zillions of dollars and say, see, that can happen to you. But it doesn't really make the point to the pilot that you are trying to hit unless you tell him that this happened right here. This is an incident that we at Ransome Airlines were lucky enough to get through. And that makes a real impression, especially when they know who did it.

The next thing that we went into when we started this was how are we going to write this? How are we going to put this together to make it not only believable but factual? So I went back to a couple of the pilots who had a very recent incident in one of our airplanes. It was about a year old. And I asked the captain to write verbatim what he could remember of the conversation with the first officer in the incident. And I asked the first officer to do the same thing.

In this incident we had an airplane that lost one of the navigation systems at an outlying station, and its next landing was to be at a maintenance facility. The weather was marginal VFR, but the airplane, according to the MEL, could proceed in VMC conditions with one Nav system.

Enroute the captain had the brilliant idea that he was going to swap the black boxes in flight and assist the maintenance department in trouble shooting the system.

The first officer was a captain downgraded because the PATCO deal, went ballistic, which was appropriate. But his intelligent and tactful talking failed him. And then the intelligent listening of the captain failed him. And then the dominant style of the regional airline captain came out and told him in no uncertain terms where to stick his opinion.

This proceeded to the point that when they changed black boxes, nobody got zapped, and we didn't zap the other system. The airplane made an uneventful landing at the maintenance facility, had both systems fixed and proceeded for the rest of the trip that day.

Needless to say, the next day said first officer was in my office complaining about said captain, and it proceeded to be a rather interesting discussion.

That, to me, was the most effective scenario that we could come up with. Not that it's the only incident that we've had in the recent past, but that it was one of the best examples of a failure of all of this, and it really, really hits home.

And what was said to them, the captain, who is normally a very levelheaded, bottom line, we will do it together type of individual, excellent aviator, and becoming an excellent manager, wrote that this very oppressive first officer with his very untactful delivery told him in no uncertain terms that he couldn't do that, in an airplane with him in it. Well, he did it anyway.

And then the first officer wrote that he very tactfully told the captain that he didn't think that he should do that, and the captain just unloaded a big 9.1 approach on him and said I'm going to do it anyway, you dummy. Just sit there and watch.

After I had the two transcripts, I had the problem of how do I write this so it's real? Because I have one guy telling me that he said this, the other one said that. So we sat down with the instructor pilots and made it out that the first officer said it less than tactfully, and that the captain accepted it less than tactfully, and that he told him less than tactfully that he was going to do it anyway. And it seems to have gone over very well.

We filmed this training scenario -- we haven't played it yet in the classroom. I'm anxious to do that. We have another class in December and we will play it for them. I am anxious to see the results of the discussion after we play this scenario.

That's where we are right now with it, and that's where we have gotten into video concepts with it. Like I said, you can't do just that. The awareness that has been running through the classroom instruction so far has given us the best results. We get a lot of discussion items out of the people who are in the class. We mix the classes. They are both captains and first officers.

And since we still have captains who were downgraded in '81 because of the PATCO deal flying in the right seat, we find it's very interesting to get comments from them on communications in the cockpit. And I think that that is as important in the overall picture of this thing as anything else that we can present.

These training scenarios seem to be the next step for us, and hopefully we will continue to improve them. Unfortunately, I don't think we will ever run out of Ransome Airline incidents so that we have to go out and use other ones. Thank you.

MR. COLLIE: Thank you, Frank. I have one question. Did you run into any problems in the classroom when you were talking about communications and you had both the captains and the first officers in the same classroom?

CAPT. FOSTER: No, we didn't really, because it's during a normal recurrent training class that we give this presentation. It's very easy to have that happen. It's very easy for that class of three very dominant captains and two or three not quite so dominant first officers to keep the first officers quiet. But that's relatively easy to handle, because I can usually pick on one of the captains and get a response. And normally I can pick on a first officer and get a response back from them too. It's not so hard to get them to talk about it as it is to get them to realize why they didn't want to talk about it in the beginning. But once you get the ball rolling, it pretty much goes right on.

We have one extremely dominant lion from the left seat, and he will just about stifle any class, but, fortunately, I give the cockpit resource management presentation, so he can only stifle the class up to here. So that's about the only time I had a problem.

It's not a big deal, I don't think, with the first officers in the classroom environment, and it is a little easier for them to express themselves there especially if I'm sitting in the front of the class. If you have a strong instructor, I think he can counterbalance the strong captain against the first officer position.

MR. COLLIE: Any additional questions?

CAPT. FISHER: I'm Bob Fischer of Summit.

One of the keys to establishing credibility in a program such as you are describing is to have the full support of your instructors. How do you then select your instructors? Do you have a common criterion that you find is most important, and how did you go about convincing your instructors to support this program?

CAPT. FOSTER: There are two questions there really. Let me answer the second one first. Convincing the instructor pilots to get themselves involved in this program was not very difficult. All the instructor pilots were present for John Lauber's presentation at Ransome. All the instructor pilots knew we were involved in it and had some background prior to John coming. All of the instructors were involved in the question of how are we going to effectively put this across to the pilots? We have a monthly instructors' meeting, and this was the topic for three months prior to John coming. So they had a pretty good background by the time he got there.

So the instructor cooperation was 100 percent just from knowing that the company was behind it, that we were very interested in this portion of training. These are the guys that pride themselves in their technical expertise and their ability to get things across to the rest of the pilots. And I don't think anybody will question that they do a good job. I think those guys are dynamite. They keep 103 pilots doing it the same way, which is impossible but they do it anyway.

When we go about selecting instructor pilots, the one thing we don't use is seniority. Not to burn anybody up, but we don't use that. That's not a consideration at all. We ask all instructor pilots to give us a list of other people that they think will be good instructors. And the master list of all those people is turned over to the director of training and myself and we review it. We go through backgrounds and education and experience level for those individuals.

The next step is to ask all the instructors to rank the people that they recommended in order. And surprisingly enough, every time we have picked a new instructor, he has been recommended in order by everybody else who has been an instructor, so it makes it easy.

I think I answered the question, so is there anything else?

MR. FELL: Have you had any problems or do you think you might experience any problems from using your own internal incidents involving your own internal crews as examples of how not to do things by showing other crew members here's

what happened to these guys. "They did wrong." "We'd rather you didn't do it this way." Have you experienced any feedback from these people?

CAPT. FOSTER: Surprisingly enough, we haven't yet. When we went about designing the first scenarios, we had a long discussion on that. As a matter of fact, we used up one entire instructor meeting on just where were we going to get the information that we built scenarios from. We had a few examples that we could have very well used that were not in-house incidents.

The prime example was the Swift Airlines crash in Los Angeles where the crew shut down the wrong engine. You can build a very effective training scenario from that particular incident. We discussed that at length, and we have that in the back of our mind that if we run into any reluctance we will go to that type of approach.

What I found is that if we can start the discussion prior to the scenario, prior to the tape, and tell everybody that this is an in-house problem; we had this incident; it was right here; it was by you or your peers; it was by one of us who did it; it's an attention getter from the beginning. How effective it is we haven't been able to measure as yet, because we haven't presented it to a class. But I have presented the same incident, this one, to the pilots that were involved in it, and both of them think it was extremely well done. Whether or not that continues, I don't know. Both of the pilots who were involved in this incident were people you could do this to.

We make them as clean as we can. We don't identify anybody, but anybody who has been around the company knows exactly who did it. So it's not a question that we are telling a story out of school. Everybody already knows it. It's a small community. It's not like United Airlines. If we have an incident of that type, every pilot in the company is going to know it two days later anyhow! So this way we bring it out and say, yes, it did happen here, and we hope everybody learns from it. So far that's the reaction we have had.

Anybody else? Okay. Thank you, Dick.

MR. COLLIE: Frank, thank you.

Frank will be chairing working group number two. Our working group chairman for that particular working group couldn't make it out to the workshop, and Frank very graciously consented to volunteer.

Metro Airlines has for some time been using some

simplified scenarios for cockpit resource management training. They have been very successful in accomplishing it with unsophisticated devices and good simplified scenarios.

Captain Ron Rice was unable to come to the workshop, and Captain Dan Weatherly the chief of training for Metro is here to make the presentation.